UHF Wireless Microphone Systems

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SONY

SONY

UHF Wireless Microphone Systems

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Feel fre to expres you

Sony offers two alternative, compatible, UHF wireless microphone systems.

The WL-800 Series has a rugged construction designed to withstand the harsh environment of location work and the rigors of day-to-day use in TV studios and theatre productions.

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The Freedom Series covers a limited number of cost effective and lighter models, making this range more suitable for interfacing with audio installations in seminar, conference and entertainment applications.

RF characteristics, audio companding and Pilot Tone Squelch functions are the same for the two systems to ensure their compatibility.

Cost effective

The Pilot Tone; Auto Set-Up; Ceramic; Helical and SAW filters; Isolator/Ring Modulator; direct 800MHz oscillation; CPU and EE-PROM and the Sony unique frequency planning all contribute to make a Sony wireless installation reliable and cost efficient.

800MHz Band Operation

Sony UHF synthesized wireless microphone systems operate between 774MHz and 862MHz (TV channels 59 to 69). This extended frequency range provides the wide choice of operating frequencies necessary for legal transmissions and to avoid mutual interference.

Advanced filtering

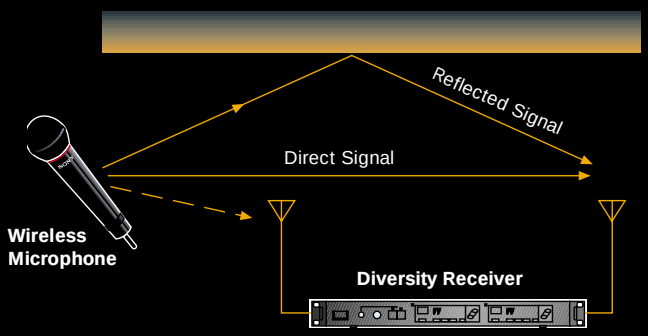
The Sony wireless units all employ Helical, Ceramic and/or SAW filters as appropriate. This offers stable reception and thus good audio quality. It also ensures that a minimum of the precious battery power available is used to supply many power hungry LC type filters.

It also enables the unique miniaturization seen in most of the Sony products.

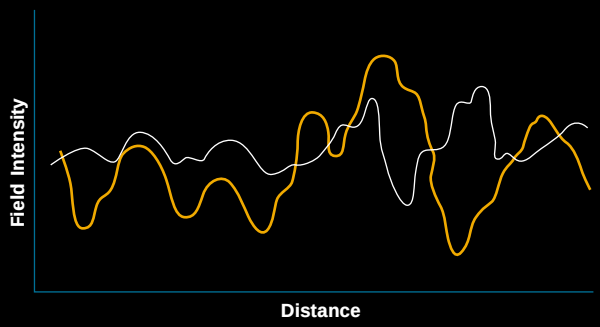
PLL Frequency Synthesis System

Phase Locked Loop (PLL) frequency synthesis systems and direct 800 MHz oscillation are used both in transmitters and receivers, assuring carrier stability and providing easy access to multiple frequencies. These PLL controlled systems enable up to 561, highly stable, operating frequencies to be generated within some of the models depending on local regulations.

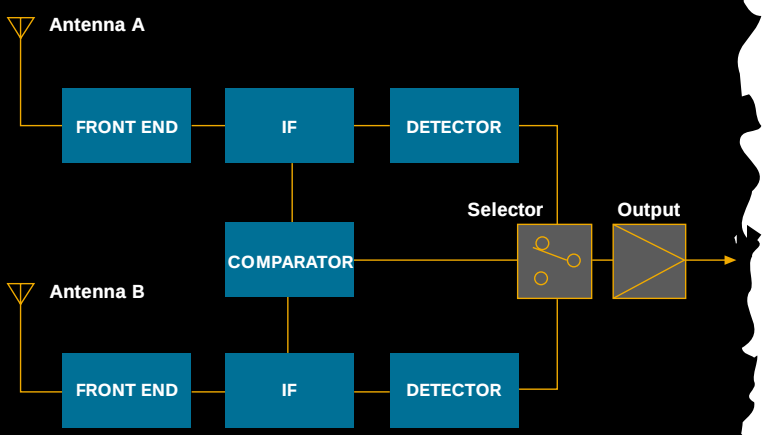
Diversity Reception



Phase differences between direct and reflected signals causes cancellation effects, giving changes in field intensity



As the distance between the wireless microphone and the receiver varies, the signal picked up by the two individual diversity antennas will also vary.



The diversity receiver selects the stronger of the two received signals as its output.

Space Diversity Reception System

A space diversity reception system provides unbroken reception and increased service area by eliminating signal dropout. Dual antenna inputs and reception circuitry incorporated in the diversity receivers, receive signals over two different transmission paths and select the stronger signal as the output. This switching operation is undetectable on the audio output of the receivers.

Pre-Programmed Frequency Groups

Optimum combinations of calculated and practically tested intermodulation-free frequencies are stored in the CPU of each receiver to make it easy to chose the correct frequencies for simultaneous multi-channel operation.

These frequencies are arranged in groups, with each group pre-programmed to avoid interference when operating close to the frequencies of local TV transmitters.

Up to 10 intermodulation-free channels can be used simultaneously within an 8MHz European TV channel. When the group facility is selected on the receiver, the grouped channels automatically step to their correct, intermodulation-free frequencies and the transmitters are then set to correspond with the channel information displayed on the receiver LCD panel. The number of TV channels available for use varies from area to area.

Sony has not only used ‘standard’ mathematical calculations to find 3rd order intermodulation free channel plans. Sony has also applied stringent practical tests. The result is that when using any of the Sony channel plans with 125kHz steps, no audible interference due to inter-transmitter intermodulation will occur. Consequently, all channels in a multi-channel set-up should have the same audio quality. When only applying pure mathematics without the practical tests, there can in specific circumstances be minor disturbances. This is a normal and non-manufacturer related physical law. The special frequency plan calculated by Sony is programmed into the receivers. By implementing this, Sony offers the user unique and optimum freedom from interference.

Pilot Tone Squelch Circuitry for Interference Free Reception

The wireless microphone transmiters also transmitt a 32kHz tone signal along with the program audio signal. In the receivers, a squelch circuit operates so that the program signal is only output when the tone signal has been correctly received. This squelch feature is designed to eliminate interference and noise because the receiver will only respond to transmissions carrying the tone signal.

Compander System for Wide Dynamic Range and Low Noise

A linear 2:1 compander (compressor/expander) system is included for improved audio dynamic range and low noise and interference. The time constants for attack and release times are carefully chosen individually in the various transmitters to match the application ensuring minimum signal to noise level while providing smooth and superior audio quality.

RF Power

By using correct power for the application – both for ENG and stationary systems, the battery consumption, low weight, small size and high security of interference in multi channel systems that Sony offer are achievable in off the shelf solutions. This is partly possible due to the use of filtering techniques such as helical and SAW filters that draw a minimal amount of power from the incoming signal.

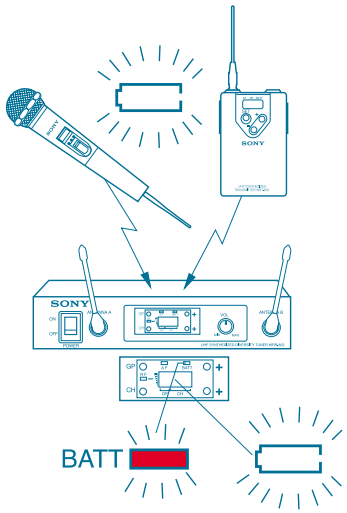
LCD for Operational Status Information

All receivers and transmitters feature a built-in, easy-to-read LCD panel which provides extensive status information. Most receivers*1 will display the diversity RF and AF signal strength, frequency and channel group chosen, and battery status of the transmitter.

Most transmitters does in essence have the same information available in the display; such as AF input level, and RF output, battery status, current channel number and group number, selected frequency, input attenuation setting, and accumulated operation time. The operation time is accumulated when unit is on, so if the time indication is reset to 0:00 at the time of battery replacement, it can display the total running time of the battery.

Remote Battery Alarm on Receiver

For added assurance of continued operation, you can now monitor the battery reserves of handheld*2 and body pack transmitters; the battery indicator on LCD starts flashing on the handheld and body pack transmitter, both indicating approx. one hour before the batteries go dead. On the receiver, the battery indicator on the LCD and LED displays also flash, helping to avoid the chance of battery failure at a critical moment.



Channel Setting Memory

Transmitters and receivers have a memory back-up of operating frequency. When power is turned on, the previous channel setting is automatically recalled and displayed.

Note: The use of Sony wireless devices is regulated by the regulatory Authority of each country's Government Administration and authorised users are required to obtain an appropriate operating license.

*1 The WRT-820A/840A does not display the battery status information transmitted.

*2 The WRT-867A does not transmit the battery status information.

UHF Synthesised Wireless Handheld Microphones

WRT-807A (Dynamic Capsule)

- **High sound quality for vocals - powerful, crisp and clean sound as well as presence in the low and mid frequency range**
- **Choice of capsules**
  1) **Dynamic hyper-cardioid microphone capsule which is employed in the Sony F-780 professional vocal microphone**
  2) **K-1335 narrow cardioid capsule**
- **Lockable external on/off switch**
- **Easy-to-read LCD screen showing the selected channel, frequency, attenuator, cumulative working time, AF level, RF level, & transmitter battery status**
- **LCD for display of channels, attenuator and accumulated operating hours**
- **One AA battery, operates continuously for 6 hours**
- **10 mW RF power output**
- **Battery alarm transmitted to compatible receivers**
- **Newly-developed lockable power switch to prevent accidental operation**

SUPPLIED ACCESSORIES

Mic holder, PF 1/2-inch thread

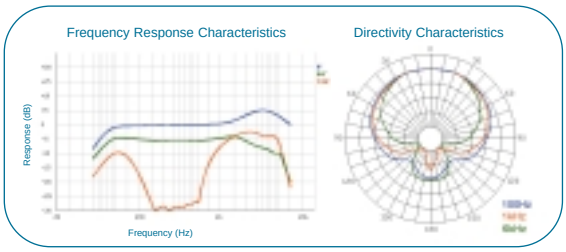
Stand adapters - PF 1/2-inch fi NS 5/8-inch

- PF 1/2-inch fi W 3/8-inch

OPTIONAL ACCESSORIES

K-1335 optional microphone capsule

CHARACTERISTICS: SUPER-CARDIOID



WRT-810A (Dynamic Capsule)

- **Dynamic microphone with cardioid response**
- **Ideal for ENG applications**
- **LCD status indication**
  - **RF carrier present**
  - **Input signal above reference level**
  - **TV channel selected**
  - **Audio attenuator setting**
  - **Wireless microphone channel selected**
  - **Battery status**
- **Rugged housing for protection from rough handling**
- **Separate audio on-off and power on-off switches**
- **Transmits battery status signal**

SUPPLIED ACCESSORIES

Mic holder, PF 1/2-inch thread

Stand adapters - PF 1/2-inch fi NS 5/8-inch

- PF 1/2-inch fi W 3/8-inch

WRT-830A (Electret Condenser Capsule)

- Cardioid electret condenser microphone capsule with low handling noise, ideal for vocal applications
- Power output selectable to 10mW or 25mW
- LCD status indication
  - RF carrier present
  - Input signal above reference level
  - TV channel selected
  - Audio attenuator setting
  - Wireless microphone channel selected
  - Battery status
- Power on-off switch concealed to prevent accidental operation
- Transmits battery status signal

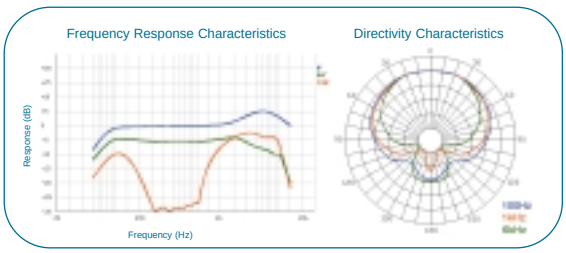
SUPPLIED ACCESSORIES
Mic holder, PF 1/2-inch thread
Stand adapters - PF 1/2-inch fi NS 5/8-inch
- PF 1/2-inch fi W 3/8-inch

WRT-867A (Dynamic Capsule)

- Hyper-Cardioid dynamic microphone capsule, also used in the acclaimed F-780 microphone
  - resilient body structure for extremely high quality sound
  - high quality, edgewise-winding voice coil with lightweight Copper Clad Aluminium Wire (CCAW) and an AlNiCo magnet
  - powerful, crisp and clear sound with middle and high frequency range presence for critical vocal applications
- Choice of capsules
  1) Dynamic hyper-cardioid microphone capsule which is employed in the Sony F-780 professional vocal microphone
  2) K-1335 narrow cardioid capsule
- 10mW power output
- Concealed LCD channel indication and operational controls
- LED battery status indication

SUPPLIED ACCESSORIES
Mic holder, PF 1/2-inch thread
Stand adapters - PF 1/2-inch fi NS 5/8-inch
- PF 1/2-inch fi W 3/8-inch
Case

CHARACTERISTICS: SUPER-CARDIOID



UHF Synthesised Body Pack Transmitters

WRT-805A

- Easy-to-read LCD screen showing the selected channel, frequency, attenuator, cumulative working time, AF level, RF level, & transmitter battery status
- Battery alarm transmitted for monitoring at compatible receivers
- Compact, lightweight design with smoothly contoured body pack
- Continuous operation up to 6 hours with a single (LR6) AA-size alkaline battery
- 10 mW RF power output
- Newly developed 3.5 mm (5/32-inch) mini phone jack with stable lock
- 1/4 wavelength whip antenna
- Switchable -40 dB/-60 dB input level and PHASE switches for guitar and lavalier microphone
- Microphone options:
  GC-0.7MP Guitar Cable, ECM-44BMP/ECM-77BMP/ECM-121BMP/ ECM-122BMP/ECM-166BMP Electret Condenser Microphone and ECM-310BMP Electret Condenser Headset Microphone

WRT-822A

- Compact and lightweight magnesium alloy body
- 10 mW RF power output
- Easy-to-read LCD screen showing the selected channel, frequency, attenuator, cumulative working time, AF level, RF level, & transmitter battery status
- Accepts professional lavalier microphones fitted with SMC9-4P connector
- Continuous operation up to 8 hours with two (LR6) AA-size alkaline batteries

SUPPLIED ACCESSORIES
Soft case

WRT-860A

- Ultra-compact design
- 20mW power output for extended service area
- Back-lit LCD status indication
  - RF carrier present
  - input signal above reference level
  - TV channel selected / audio attenuator setting / accumulated time-of-use
  - wireless microphone channel selected and operating frequency in MHz
  - cumulative battery operating time with manual reset
- Accepts professional lavalier microphones fitted with a SMC9-4P connector
- Transmits a battery status signal
- Continuous operation up to 6 hours with two (LR6) AA-size alkaline batteries

SUPPLIED ACCESSORIES
Soft case
Battery case
Mic cable EC-1.5CF
Carrying case

UHF Synthesized Diversity Tuner

WRR-802A

- UHF Synthesized Diversity Tuner
- Single-channel Space Diversity Tuner, Half 19-inch rack width, 1U high
- Same receiver module as the WRU-806A
  Use of SAW filters for exceptional rejection of unwanted signals while maintaining the best possible signal integrity of the wanted signal
- Output level control on front panel
- Front-mounted passive antennas (supplied)
- MI industry standard fitting for rack mount adapters
- AF, RF, and battery alarm indication by both LED and LCD to double check operating condition
- Easy-to-read LCD display showing the selected channel and IM free group, frequency, RF level, AF level and battery level status
- Two types of output connectors
  - TRS Phone Balanced connector (6.3 mm dia.), LINE level; –20dBm @ ref. deviation; headroom at +4dBm is 16dB
  - XLR connector, MIC or LINE level. MIC level is –58dBm @ref deviation

SUPPLIED ACCESSORIES
External 9V Power Adapter
Two passive $^{1}/_{4}\lambda$ antennas

Receiver Base Unit

MB-806A

- Six channel operation in a 1U high, 19-inch rack unit
- Expandable diversity receiver, accepting up to six WRU-806 (or WRU-801A) of any frequency supplied
- RF input attenuation selector, 0dB/10dB
- Balanced output on XLR connectors, switchable MIC (–58dBm @ref deviation)or LINE level. –20dBm @ ref. Deviation. With LINE level selected, headroom at +4dBm is 16dB
- Front mounting of antennas possible with industry standard BNC/BNC front adapter from many third party RF suppliers such as Canford Audio
- Space Diversity Reception for dependable RF reception
- Auto channel assignment of additional receiver modules for instant programming of interference-free multi-channel operation
- Supplied passive antennas for rear mounting
  (with provision for front mounting)

SUPPLIED ACCESSORIES
Two passive $^{1}/_{4}\lambda$ antennas

UHF Synthesized Receiver Unit

WRU-806A

- Dedicated plug-in diversity receiver module for MB-806A (or WRU-801A)
- Auto channel assignment for extra receiver modules with self-detection and skip of unusable channels
- Pre-programmed groups stored in CPU for intermodulation free operation of multi-channel systems
- AF, RF, and battery alarm indication by both LED and LCD to double check operating condition
- Easy-to-read LCD display showing the selected channel and IM free group, frequency, RF level, AF level and battery level status
- Use of SAW filters for exceptional rejection of unwanted signals while maintaining the best possible signal integrity of the wanted signal
- Space Diversity Reception for dependable RF reception

Two-Channel Diversity Receiver

WRR-840A

- Audio ouput level selectable to -20/-40/-60dBU @ref deviation
- LCD status indication
  - TV channel
  - wireless microphone group and channel
- LED indication of RF and audio signals present
- Provides power to two AN-820A antennas via coaxial cable

Single-Channel Diversity Receiver

WRR-820A

- WRR-820A identical to WRR-840A with the following exemptions:
- Only one receiver channel
- An additional RF diversity antenna through connector

Two-Channel Diversity Receiver

WRR-850A

- Outstanding RF performance and audio quality
- Two diversity receivers for two-channel operation
- RF mutting feature, selectable to operate to 15/25/35dBu
- Multi-function system information display includes
  - transmitter battery alarm (when receiving a WRT-860A)
  - antenna in use (A or B - diversity)
  - audio level
  - TV channel and operating frequency in MHz
  - wireless microphone group and channel number
  - muting level selected
  - output level selected
- Two-digit LED display of user-assigned identification number
- Front panel headphone monitoring ouput with level control, selectable to wither or both receivers
- Provides power to two AN-820A antennas over coaxial cable

UHF Synthesized Portable Receivers

WRR-805A

- Compact, lightweight portable tuner for a wide variety of camcorders that have a stereo mini jack
- Easy-to-read LCD screen showing the selected channel, frequency, attenuator, cumulative working time, AF level, RF level, & transmitter battery status
- Continuous operation up to 6 hours with a two AA-size (LR6) alkaline batteries
- Newly developed 3.5 mm (5/32-inch) mini phone jack with stable screw lock
- Ingenious camera mount; swivel, velcro, Betacam plate - single & dual
- Flexible mounting position and direction for secure operation, for DV, DVCAM, SX and DigiBeta
- Convenient headphone monitoring with volume control
- Comprehensive RF Squelch functions

SUPPLIED ACCESSORIES

Attachment case with a belt clip

Operating instructions

Output cable

OPTIONAL ACCESSSORY

R805AttachmentS, for attachment to other Sony cameras

R805AttachmentD, for attachment of two WRR-805A's to other Sony cameras

WRR-810A

- Monitoring output
- LED indication of received RF signal level
- LCD status indication
  - audio output
  - TV channel selected
  - frequency group selected
  - wireless microphone channel selected
  - battery status
  - mute function on/off

SUPPLIED ACCESSORIES

Betacam camcorder mounting kit

1/4λ whip antenna

Output cable

WRR-855A (Diversity Receiver)

- Designed for use with Betacam camcorders, water resistant structure
- LED indications of received RF signal level and audio output
- LCD shows
  - wireless microphone operating channel and group
- Powered from camcorder
  - direct interface for Sony Betacam SX camcorders
  - via optional mounting adapter (BTA-801) with other Sony camcorders

SUPPLIED ACCESSORIES

1/4λ whip antenna

WRR-860A (Diversity Receiver)

- Two way powering
  - internal batteries
  - 12V external DC supply
- Monitoring output with level control
- Back-lit LCD status indication
  - four-level indication of received RF signal level for each antenna
  - A or B antenna in use
  - RF muting level selected
  - audio output
  - wireless microphone group and channel selected
  - operating frequency in MHz
  - cumulative battery operating time with manual reset
  - external power connected
  - muting level selected

SUPPLIED ACCESSORIES

Soft case, shoulder strap

Betacam camcorder mounting kit

1/4λ whip antenna x 2

Output cable

DC power cable

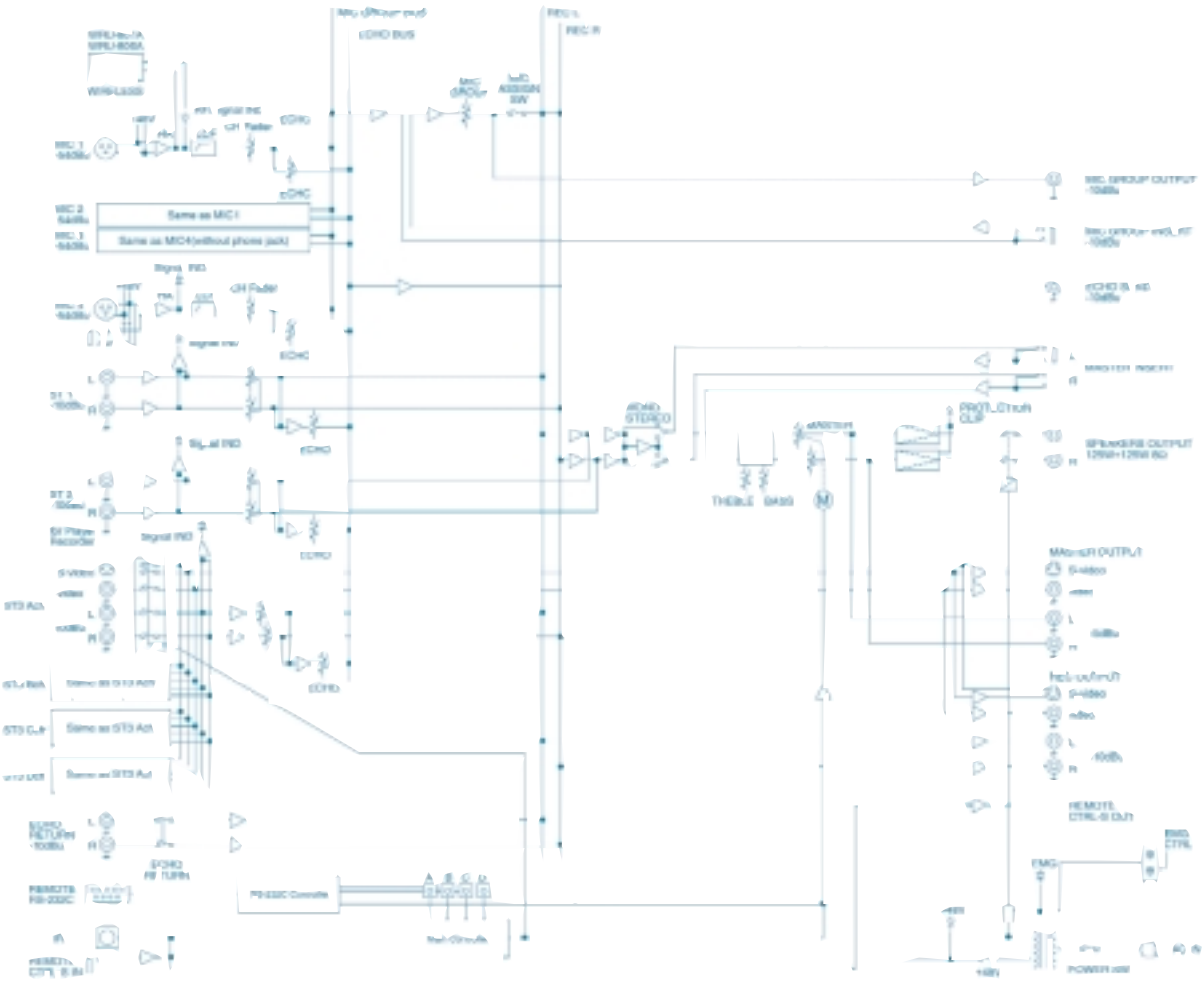
Spare battery case

Powered A/V Mixer With Freedom Receiver

SRP-X351P with WRU-806A

- 3U rackmounting
- 4 balanced mircophone inputs (XLR)
- signal/RF present LEDs on each channel, CLIP LEDs on outputs
- Accepts up to two WRU-806A Freedom Series receiver modules
  Routed to Mic 1 & Mic 2 inputs
- +48V phantom power
- front panel microphone input (1/4" jack) (MIC 4)
- 3 stereo inputs
- 4 way A/V source selector (ST 3)
- 125W per channel (8Ω) Power Amplifier
- MIX L & R insert points
- MIC group output & insert point
- Infra red remote control (SRP-351RM)
- RS-232C remote
- AUX send and return
- output MONO switch
- tone controls on master output
- large motorised master volume control

Block Diagram



Peripherals for Transmitters

Omni directional Electret Condenser Lavalier Microphone

ECM-77 Series

- High performance ultra miniature microphone
- Frequency response 40-20,000Hz
- Max input sound pressure level: 120dB SPL
- Sensitivity (0 dB = 1 V/1 Pa. at 1 kHz): -39 dB (11 mV) 2 dB
- Microphone head; *5.6 x 12.5mm, 1.5g
- Fitted with 1.2m cable, termination as below
- Three versions available
  - ECM-77B black finish
  - ECM-77F beige (skin color) finish
  - ECM-77S satin-nickel finish
- Four types of connections available
  - No suffix (e.g. ECM-77B) supplied with XLR-2-12C type connector for two way powering (AA battery and 12-48V Phantom Power)
  - C suffix (e.g. ECM-77BC) supplied with SMC9-4P connector for use with WRT-822A and WRT-860A
  - MP suffix (e.g. ECM-77BMP) supplied with Mini Jack with stable lock function for use with WRT-805A, only available in black
  - PT suffix (e.g. ECM-77BPT) supplied with no connector (Pig Tail) for use with any connector type as desired, only available in black and beige

Cardioid, Electret Condenser Lavalier Microphone

ECM-66 Series

- Frequency response 70-14,000Hz
- Max input sound pressure level: 130dB SPL
- Microphone head; black color, *10.6 x 24.2mm, 7g
- Fitted with 1.2m cable, termination as below.
- Three types of connections available
  - No suffix (e.g. ECM-66B) supplied with XLR-2-12C type connector for two way powering (AA battery and 12-48V Phantom Power)
  - C suffix (e.g. ECM-66BC) supplied with SMC9-4P connector for use with WRT-822A and WRT-860A
  - PT suffix (e.g. ECM-66BPT) supplied with no connector (Pig Tail) for use with any connector type as desired

Omni directional Electret Condenser Lavalier Microphone

ECM-55 Series

- Frequency response 30-18,000Hz
- Max input sound pressure level: 126dB SPL
- Microphone head; black color, *10.6 x 21mm, 6.5g
- Fitted with 1.2m cable, termination as below.
- Three types of connections available
  - No suffix (e.g. ECM-77B) supplied with XLR-2-12C type connector for two way powering (AA battery and 12-48V Phantom Power)
  - C suffix (e.g. ECM-77BC) supplied with SMC9-4P connector for use with WRT-822A and WRT-860A
  - PT suffix (e.g. ECM-77BPT) supplied with no connector (Pig Tail) for use with any connector type as desired

Omni directional Electret Condenser Lavalier Microphone

ECM-44 Series

- Frequency response 40-15,000Hz
- Max input sound pressure level: 122dB SPL
- Microphone head; black color, *8.5 x 14.5mm, 2g
- Fitted with 1.2m cable, termination as below
- Three types of connections available
  - No suffix (e.g. ECM-44B) supplied with XLR-2-12C type connector for two way powering (AA battery and 12-48V Phantom Power)
  - C suffix (e.g. ECM-44BC) supplied with SMC9-4P connector for use with WRT-822A and WRT-860A
  - MP suffix (e.g. ECM-44BMP) supplied with Mini Jack with stable lock function for use with WRT-805A
  - PT suffix (e.g. ECM-44BPT) supplied with no connector (Pig Tail) for use with any connector type as desired

Cardioid, Electret Condenser Lavalier Microphone

ECM-166BMP

- Frequency response 100-10,000Hz
- Microphone head; black color, *12.5 x 23.4mm, 3.5g
- Fitted with 1.2m cable, termination with Mini Jack with stable lock function for use with WRT-805A

Omni directional Electret Condenser Lavalier Microphone

ECM-122BMP

- Frequency response 100-10,000Hz
- Microphone head; black color, *8.5 x 17mm, 3g
- Fitted with 1.2m cable, termination with Mini Jack with stable lock function for use with WRT-805A

Cardioid, Electret Condenser Headset Microphone

ECM-310 Series

- Headset-style microphone for presenter applications
- Wide cardioid capsule
- Lightweight, with flexible microphone positioning for optimum voice pick-up
- Unobtrusive, anti-slide headband
- Frequency response 70-12,000Hz
- Two types of connections available
  - C suffix (e.g. ECM-310BC) supplied with SMC9-4P connector for use with WRT-822A and WRT-860A
  - MP suffix (e.g. ECM-310BMP) supplied with Mini Jack with stable lock function for use with WRT-805A

Omni-directional Headset Microphone

ECM-350BC

- Headset-style microphone for TV/stage vocal applications
- Lightweight and with flexible microphone positioning for optimum vocal pick-up
- Unobtrusive, anti-slide headband
- Frequency response 40-15,000Hz
- Fitted with 1.2m cable terminating in SMC9-4P connector for use with WRT-822A and WRT-860A transmitters

Interface cables

Microphone Cable

EC-1.5CF

- Fitted with an XLR-3-11 connector and an SMC9-4P connector
- Enables a microphone, or other low-level sound source with a 3-pin male XLR output connector, to be connected to a WRT-822A/860A transmitter
- Cable Length 1.5m

Instrument Cables

K-1161 & GC-0.7MP

Picture shown is GC-0.7MP

- Incorporates impedance converter FET
- Special active guitar cable for high quality reproduction of guitar sound
- K-1161: Length 700mm, terminating in the SMC9-4P connector for use with WRT-822A and WRT-860A
- GC-0.7MP: Length 700mm, terminating in a 3 pole Mini-Jack plug with Stable-Lock function for secure cable operation

Mini Jack Plug For Freedom With Stable Lock Function

K-1324

- Mini Jack Plug with screw safe lock feature
- For connecting other microphones to a WRT-805A
- For connecting the WRR-805A to other equipment as required

Optional capsule

K-1335

- Narrow cardioid
- High quality, edgewise-winding voice coil with lightweight Copper Clad Alumnium Wire (CCAW) and AlNiCo magnet
- Reduced proximity effect
- Exceptional feedback rejection
- Smooth sound

Receiving Antenna Components & Accessories

Active Antenna

AN-820

- 10dB gain
- Easy installation on a wall, or on a microphone stand with the supplied stand adapters
- Designed to be inconspicuous and harmonize with any surroundings
- Used in pairs for diversity reception
- Fig of eight reception free field omni in half sphere

SUPPLIED ACCESSORIES

Attachment A, for mounting on to a recessed wall box
Attachment B, for fixing direct to a wall
Mic stand screw
Mic stand adapter, PF 1/2-inch to NS 5/8-inch

UHF Frequency Spectrum Divider

WD-880A

- Permits simultaneous operation of up to 48 UHF wireless microphones in the frequency band 774 - 820 MHz
- Ideal for complex, multi-channel applications from large scale live music events to TV OBs and large theatre productions. Special applications where RF problems may occur due to outside factors
- Band pass SAW filters divide the spectrum of TV channels 59 to 64 into six frequency bands which are output from the WD-880A
  - the RF signal bandwidth from each output gives a receiving system the capability of simultaneously operating a group of up to eight wireless microphone channels free of third-order intermodulation effects
  - band pass SAW filtering eliminates mutual interference between each of the six groups of eight channels to allows uncompromised operation on up to 48 channels
- Dual inputs and outputs for diversity operation
- DC supply to operate AN-820A antennas or K-1237 antenna booster units over interconnecting coaxial cable

Antenna Divider

WD-820A

- Provides diversity signal outputs for up to four receivers
- Multi-channel operation using various combinations of WRR-820A, WRR-840A and WRR-850A receivers
- Cascade output can be used for an additional receiver
- Two pairs of antenna input connectors allow either two or four antennas to be connected to expand the operating area of a wireless microphone system
- DC 9V supply to operate four AN-820A antennas via coaxial cable

SUPPLIED ACCESSORIES

50ohm BNC termination x 6

Interconnecting Coaxial Cables

WBC Series

- 50ohm coaxial cables, fitted with BNC connectors at both ends, to interconnect antennas, dividers and non-portable receivers

  - 0.6m, WBC-0.6B-5P
  - 10m, WBC-10B-5P
  - 20m, WBC-20B-5P
  - 30m, WBC-30B-5P
  - 0.6m, WBC-50B-5P

Receiver Base Unit

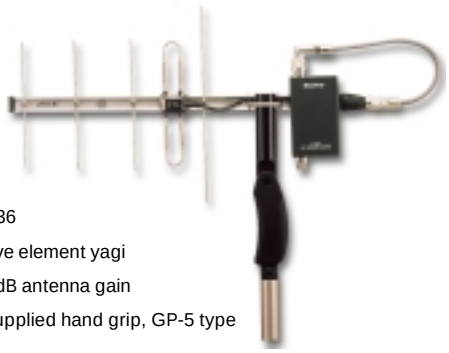
K-1234

- Plug-in accommodation for up to six WRR-860A receivers to provide a portable diversity reception unit
- Ideal for field operations
- Front-panel status LCD and channel switching for each receiver
- Two-way powering
  - AC supply
  - DC 12V
- Cascade antenna connections
- Headphone monitoring output with level control

SUPPLIED ACCESSORIES
1/4λ whip antenna x 2
Coaxial cable x2

Yaghi Anntenna/Anntenna Booster Unit

K-1236/K-1237



- K-1236
  - five element yagi
  - 8dB antenna gain
  - supplied hand grip, GP-5 type
- K-1237
  - switchable gain, 0/10/20dB
  - two-way powering from internal batteries or external DC 12V supply

K-1237 SUPPLIED ACCESSORIES
Battery case
Coaxial cable 0.3m

Note: Use of wireless devices may be regulated by national governments. The user should investigate the local regulations and licensing laws before using any wireless microphone system.

DC Power Supply

DC-WL800

- Enables WRT-822A and WRT-860A transmitters, WRR-810A receiver and DC-WL800 to operate on an external 12V supply
- DC 10-17V to DC 3V converter, replaces the battery case of the transmitter
- Attached power cable interfaces with the DC 12V output connector of a Sony camcorder
- Load current less than 250mA

Soft Case For WRT-805A

LCS-T805

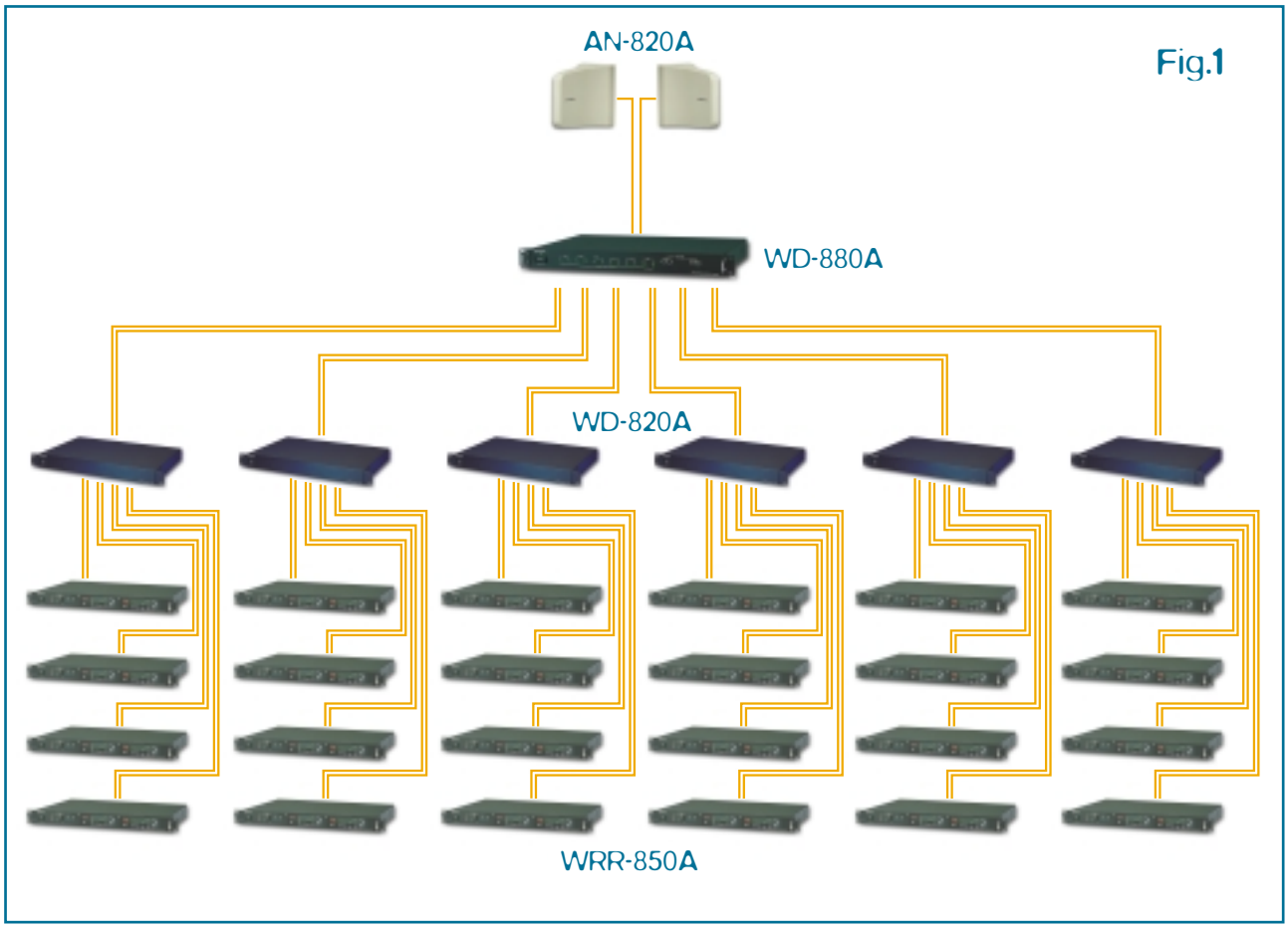
- Holding WRT-805A UHF Synthesized Body Pack Transmitter to be attached to a guitar strap
- Guitar strap width: 15 mm (19/32 inch) to 70 mm (2 7/8 inches)

Carrying Case

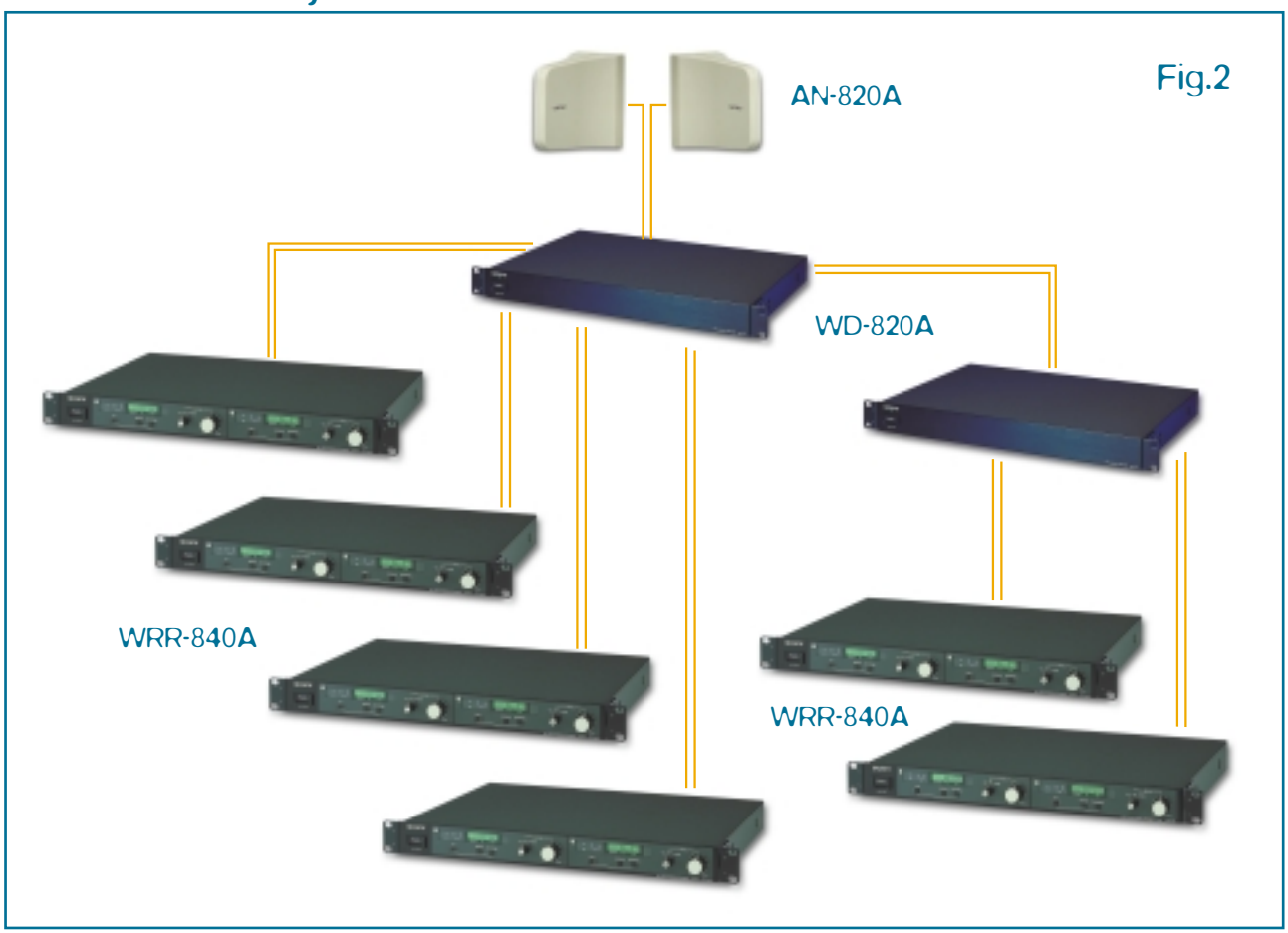
SC-M800

- Compact and lightweight polypropylene case
- Capacity to hold: WRT-805A, WRT-807A, WRR-802A, lavalier microphones and accessories
- Dimensions: 460 (W) x 390 (H) x 90 (D) mm (18 1/8 x 15 3/8 x 3 5/8 inches)
- Mass: 1.4 kg (3 lb 1.38 oz)

48 channel WL-800 System*

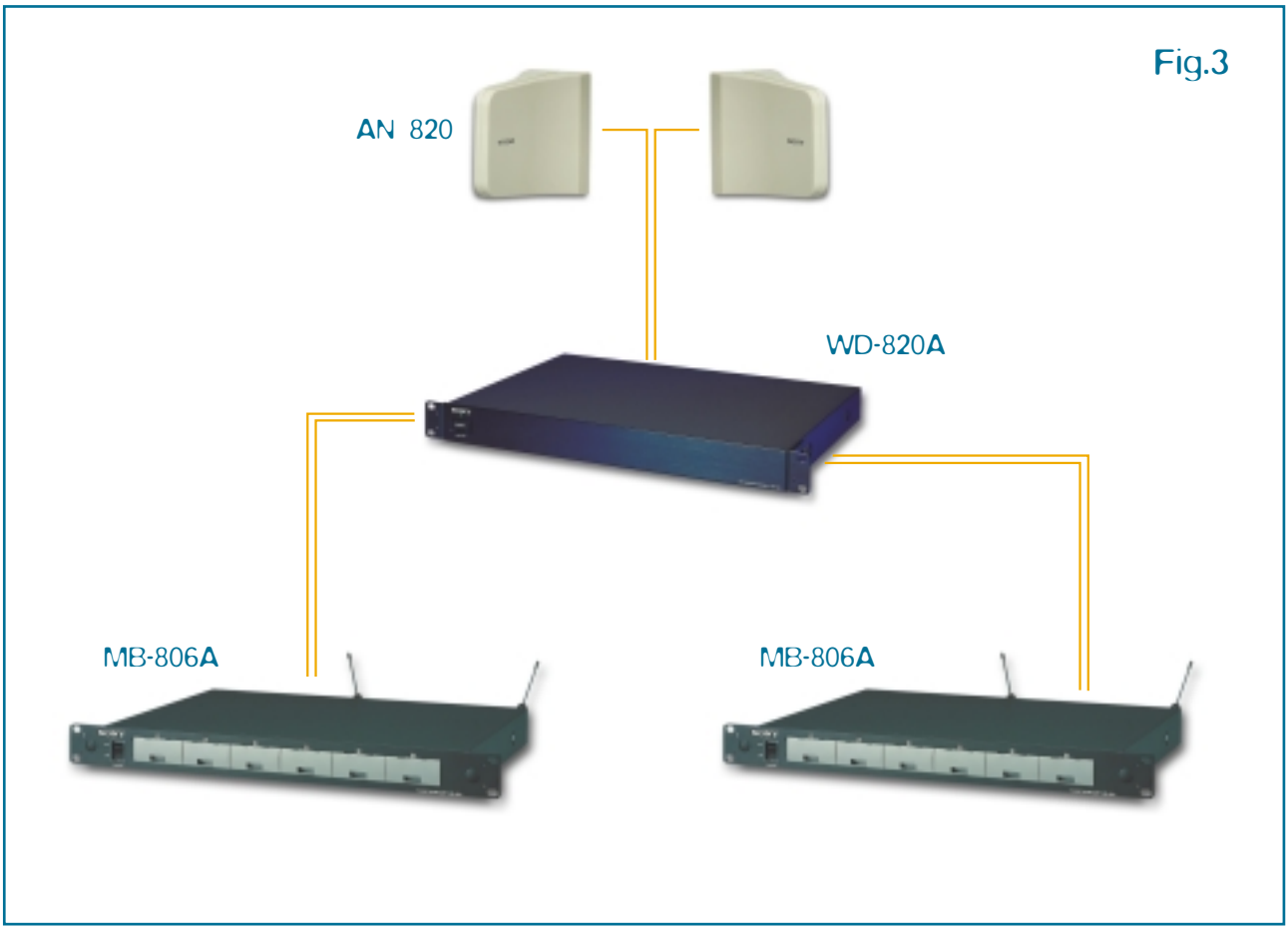


12 channel WL-800 System*



12 channel Freedom System*

Fig.3



Typical Small Auditorium Configuration

Fig.4a

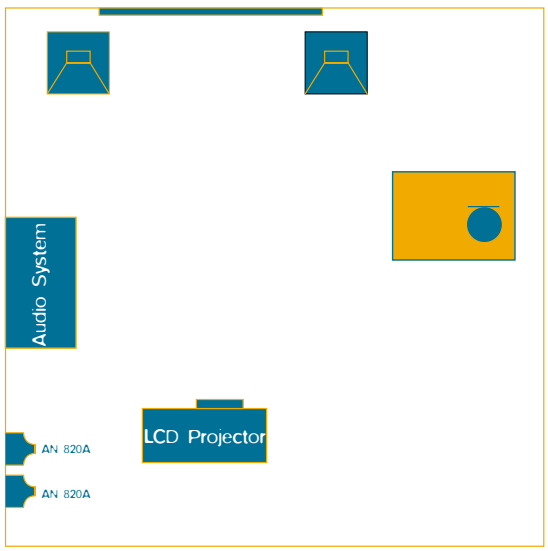
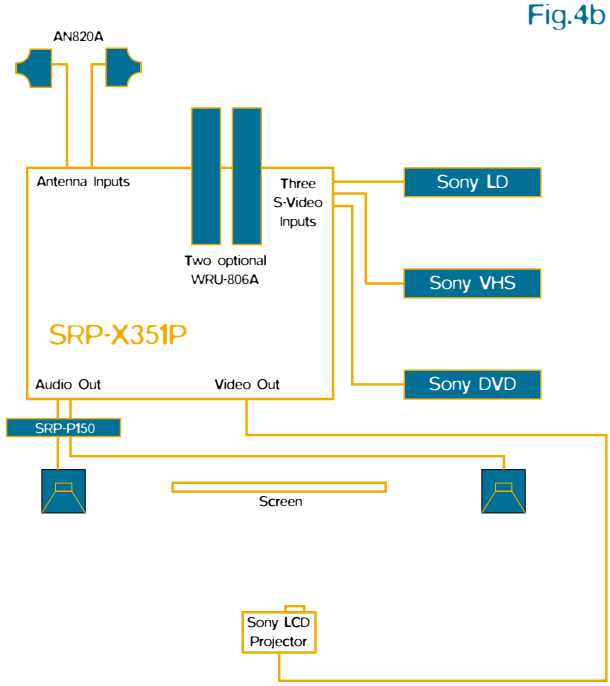


Fig.4b



*Note: maximum number of channels depending on national frequency regulations

UHF Synthesised Wireless Handheld Microphones

Specifications	WRT-807A	WRT-810A	WRT-830A	WRT-867A
Carrier frequency range	CE62 model 800-814MHz	774-862MHz, selectable (depending on version)	774-862MHz, selectable (depending on version)	774-862MHz, selectable (depending on version)
	CE69 model 854-862MHz	-	-	-
Switchable frequencies	CE62 model 561ch selectable	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel
	CE69 model 78ch selectable	-	-	-
RF power output	10mW	10mW or 2.5mW, selectable, into 50ohms	10mW or 2.5mW, selectable, into 50ohms	10mW into 50ohms
Oscillator	Crystal controlled PLL synthesizer	Crystal-controlled PLL synthesizer	Crystal-controlled PLL synthesizer	Crystal-controlled PLL synthesizer
Frequency stability	-	Within ±0.005%	Within ±0.005%	Within ±0.005%
Type of emission	110KF3E	110KF3E	110KF3E	110KF3E
Spurious radiation	-	≤2.5μW	≤2.5μW	≤2.5μW
Tone signal	32.768kHz	Approx. 32kHzv	Approx. 32kHz	Approx. 32kHz
Antenna	1/4λ wave length wire antenna	1/4λ wire antenna	1/4λ wire antenna	1/4λ helical
Pre-emphasis	50μs	50μs	50μs	50μs
Reference deviation	±5kHz (94dBSPL, 1kHz input)	±5kHz	±5kHz	±5kHz
Maximum deviation	±40kHz	±40kHz	±40kHz	±40kHz
Maximum modulation frequency	-	15kHz	15kHz	15kHz
Frequency response	50 to 15,000 Hz	100Hz-13kHz	100Hz-13kHz	50Hz-15kHz
Signal-to-noise ratio 1	>60dB @±5kHz deviation	>60dB @±5kHz deviation	>60dB @±5kHz deviation	>60dB @±5kHz deviation
Signal-to-noise ratio 2	>96dB @±40kHz deviation	>96dB @±40kHz deviation	>96dB @±40kHz deviation	>96dB @±40kHz deviation
Audio distortion	-	≤1.5%, with reference deviation	≤1.5%, with reference deviation	-
Audio attenuator adjustment range	0 to 21dB (variable in 3dB steps)	21dB, variable in 3dB steps	21dB, variable in 3dB steps	0, 6 and 12dB, selectable
Max. input sound pressure level	151dBSPL (w/21dB attenuator)	151dB SPL (with 21dB attenuation)	151dB SPL (with 21dB attenuation)	142dB SPL (with 12dB attenuation)
Max. audio input level	-	-	-	-
Microphone capsule	Dynamic	Dynamic, cardioid	Electret condenser, cardioid	Dynamic, cardioid
Operating voltage	Internal battery,1.5 V DC 1 x LR6 battery	Internal battery, 3V 2 x LR6 batteries	Internal battery, 3V 2 x LR6 batteries	Internal battery, 1.5V LR6 battery
Operating current	Less than 170mA	≤170mA	≤170mA	≤200mA
Battery life	Approx. 5 hours	8H typical	8H typical	4H typical
Operating Temperature	0°C to +50°C (32°F + 122°F)	0° - 50°C	0° - 50°C	0° - 50°C
Storage Temperature	-30°C to +60°C (-22°F + 140°F)	-30° - +60°C	-30° - +60°C	-30° - +60°C
Dimensions	ø51 x 238mm w/o antenna	Ø48 x 238mm	Ø48 x 238mm	Ø51 x 195mm (228mm including antenna)
Mass	Approx. 440g (incl. battery)	300g with batteries	300g with batteries	325g with battery

UHF Synthesised Wireless Handheld Microphones

Specifications	WRT-805A	WRT-822A	WRT-860A
Carrier frequency range	800 – 862 MHz, selectable (depending on version)	774-862MHz, selectable	774-862MHz, selectable
Switchable frequencies	64 within an 8 MHz TV Channel	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel
RF power output	10 mW	10mW	20mW into 25ohms
Oscillator	crystal-controlled PLL synthesizer	Crystal controlled PLL synthesizer	Crystal-controlled PLL synthesizer
Frequency stability	-	Within ±0.002%	Within ±0.005%
Type of emission	110KF3E	110KF3E	110KF3E
Spurious radiation	-	Less than 2.5µW	Less than 2.5µW
Tone signal	-	32.768kHz	Approx. 32kHz
Antenna	1/4 λ helical	1/4λ wire antenna	1/4λ wire antenna
Pre-emphasis	-	50µ sec	50µs
Reference deviation	±5 kHz	±5kHz (-60dBV, 1kHz input)	±5kHz
Maximum deviation	-	±40kHz	±40kHz
Maximum modulation frequency	-	-	15kHz
Frequency response	100 Hz-15 kHz	70 to 15,000kHz	50Hz-15kHz
Signal-to-noise ratio 1	>60dB @±5kHz deviation	>60dB @±5kHz deviation	>60dB @±5kHz deviation
Signal-to-noise ratio 2	>96dB @40KHz deviation	>96dB @40KHz deviation	>96dB @40KHz deviation
Headroom at ref. Level	39 dB	39 dB	39 dB
Audio distortion	-	1.00%	-
Audio attenuator adjustment range	21 dB in 3 dB steps	0 to 21 dB, variable in 3-dB steps	30dB, variable in 3dB steps
Reference Input Level	-60 dBV	-60dBv at Audio Attenuator 0dB	-
Max. input level	-3 dBV (mic position)	7dBV	-
Input Impedance	-	3kΩ	-
Input Connector	mini-jack with Stable Lock feature, unbalanced	Sony SMC9-4S	-
Operating voltage	internal battery, 1.5 V 1 x LR6 battery	3.0 VDC, LR6 batteries (AA-size)	Internal battery, 3V 2 x LR6 batteries
Operating current	170 mA	175mA	≤185mA
Battery life	6 H typical	Approx. 8 hours	6H typical
Operating Temperature	-	0°C to +50°C (32°F to 122°F)	0° - 50°C
Storage Temperature	-	-30°C to +60°C (-22°F to +140°F)	-30° - +60°C
Dimensions	58(W) x 93(H) x 21(D) mm	63 x 103 x 17 mm (w/h/d)	63(W) x 78(H) x 17(D)mm
Mass	120 g with battery	Approx. 145g including battery	160g with batteries

Diversity Receivers

Specifications	WRR-802	MB-806	WRU-806
Receiving frequencies			
CE (62)	800 – 814 MHz	-	800 – 814 MHz
CE (69)	854 – 862 MHz	-	854 – 862 MHz
Oscillator	Crystal controlled PLL synthesizer	-	Crystal controlled PLL synthesizer
Type of reception	110KF3E	-	110KF3E
Reference deviation	±5 kHz	-	±5kHz
Maximum deviation	±40 kHz	-	±40kHz
Selectivity	60 dB or more (at *250 kHz detuned)	-	60 dB or more (at *250 kHz detuned)
Spurious rejection	70 dB or more	-	70 dB or more
Image rejection ratio	60 dB or more	-	60 dB or more
Frequency range	100 Hz to 1,5000 Hz	-	100 Hz to 15,000 Hz
Signal-to noise ratio 1	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	-	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz
Signal-to noise ratio 2	>96dB, at max deviation	-	>96dB, at max deviation
Headroom at ref. Level	39dB	-	39dB
Harmonic distortion	1.0 % or less(±40 kHz deviation at 1 kHz modulation)	-	1.0 % or less(±40 kHz deviation at 1 kHz modulation)
RF muting level	30 dBμ	-	30 dBμ
Tone signal frequency	32.768 kHz	-	32.768 kHz
Audio output level	LINE: -20 dBm (±5 kHz deviation at 1 kHz modulation)	LINE: -20 dBm (±5 kHz deviation at 1 kHz modulation)	-28 dBu (±5 kHz deviation at 1 kHz modulation)
	MIC: –58 dBm(±5 kHz deviation at 1 kHz modulation)	MIC: –58 dBm(±5 kHz deviation at 1 kHz modulation)	-
Mix output level	-	LINE: -20 dBm (±5 kHz deviation at 1 kHz modulation)	-
	-	MIC: or –58 dBm(±5 kHz deviation at 1 kHz modulation)	-
Audio output impedance	150 ohms	150 ohms	-
Audio output connector	XLR-3-12C type TRS phone, 6.3 mm (1/4 inches) dia., balanced	XLR-3-12C type	Multi-connector (10-pin)
Antenna connector	BNC-R type	BNC-R type	-
Power consumption	-	30 W	-
Operating voltage	DC 9 V	AC 120 V, 60 Hz (U)	DC 9 V
	-	AC 230 V, 50 Hz (CE)	-
	-	AC 100 V, 50/60 Hz (J)	-
Current consumption	Approx. 600 mA	-	Approx. 600 mA
Operating temperature	0*C to 40*C(32*F to 104*F)	0*C to 40*C(32*F to 104*F)	0*C to 40*C(32*F to 104*F)
Storage temperature	-20*C to 55*C(-4*F to 131*F)	-20*C to 55*C(-4*F to 131*F)	-20*C to 55*C(-4*F to 131*F)
Dimensions (W x H x D)	218 x 44 x 210 mm (8 5/8 x 1 3/4 x 8 3/8 inches)	482 x 44 x 300 mm (19 x 1 3/4 x 11 7/8 inches)	57 x 26 x 122 mm (2 1/4 x 1 1/16 x 4 7/8 inches)
Mass	Approx. 1.6 kg (3 lb 8 oz)	Approx. 3.6 kg (7 lb 15 oz) w/o WRU-806/A	Approx. 160 g (5.7 oz)
Supplied accessories	Operating instructions (1), AC power adapter (1), Antennas (2)	Operating instructions (1), AC power adapter (1), Antennas (2)	Operating instructions (1)

Design and specifications are subject to change without notice.
0 dBμ = 1 μV
0 dBm = 0.775 Vrms (600 ohms loaded)
0 dBu = 0.775 Vrms (unloaded)

Diversity Receivers

Specifications	WRR-820A	WRR-840A	WRR-850A
Carrier frequency range	774-862MHz (depending on version)	774-862MHz (depending on version)	774-862MHz (depending on version)
Switchable frequencies	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel
Type of reception	110KF3E	110KF3E	110KF3E
Circuit system	Dual conversion superhetrodyne	Dual conversion superhetrodyne	Dual conversion superhetrodyne
Local oscillators	First, crystal-controlled PLL synthesizer. Second, crystal	First, crystal-controlled PLL synthesizer. Second, crystal	-
Intermediate frequencies	-	-	1st IF 150.75MHz, 2nd IF 10.7MHz
RF sensitivity	20dBμ, signal-to-noise ratio ≥30dB A-weighted, deviation ±5kHz	20dBμ, signal-to-noise ratio ≥30dB A-weighted, deviation ±5kHz	20dBμ, signal-to-noise ratio ≥30dB A-weighted, deviation ±5kHz
Spurious signal rejection ratio	≥60dB	≥60dB	>80dB
Selectivity	>50dB	>50dB	>60dB, ±250kHz detuned
Image rejection ratio	>50dB	>50dB	>80dB
Muting level	<35dBμ	<35dBμ	35/25/15dBμ, selectable
Antenna connector	BNC-R type, 50ohms	BNC-R type, 50ohms	BNC-R type, 50ohms
Tone signal	Approx. 32kHz	Approx. 32kHz	Approx. 32kHz
De-emphasis	50μs	50μs	50μs
Frequency response	100Hz-15kHz ±3.0dB	100Hz-15kHz ±3.0dB	50Hz-15kHz ±3.0dB
Signal-to-noise ratio 1	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz
Signal-to-noise ratio 2	>96dB, at max deviation	>96dB, at max deviation	>96dB, at max deviation
Headroom at ref. Level	39dB	39dB	39dB
Power for antenna amplifiers	9V	9V	9V
Dynamic range	>96dB, A-weighted, RF input 60dBμ, deviation ±40kHz, modulation 1kHz	>96dB, A-weighted, RF input 60dBμ, deviation ±40kHz, modulation 1kHz	>96dB, A-weighted, RF input 60dBμ, deviation ±40kHz , modulation 1kHz
Audio distortion	≤1.0% with deviation ±40kHz, modulation 1kHz	≤1.0% with deviation ±40kHz, modulation 1kHz	≤1.0% with deviation ±40kHz, modulation 1kHz
Audio output level	into 10K ohms, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	into 10K ohms, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	-58/-20dBm selectable, RF input 60dBμ, deviation ±5kHz , modulation 1kHz
	-40/-20dBu selectable, phono	-40/-20dBu selectable, phono	-
	-60/-40/-20dBu selectable, XLR-3-32	-60/-40/-20dBu selectable, XLR-3-32	-
Audio output connectors	phono/XLR-3-32 x 2	phono/XLR-3-32 x 2	XLR-3-32 x 2
Audio output impedance	600ohms	600ohms	150ohms, balanced
Power requirements	AC 220-240V 50/60Hz	AC 220-240V 50/60Hz	AC 220-240V 50/60Hz
Power consumption	12W, WRR-820A	20W, WRR-820A	30W
Operating temperature	0° - 50°C	0° - 50°C	0° - 50°C
Storage temperature	-20° - +60°C	-20° - +60°C	-20° - +60°C
Dimensions	482(W) x 44(H) x 300(D)mm	482(W) x 44(H) x 300(D)mm	482(W) x 44(H) x 300(D)mm
Mass	4.9kg	5.4kg	5.4kg

SRP-X351P

Specifications	
Frequency response	20-20 KHz +0.5 / -1dB
THD	< 0.05% (-10 dBu, ST in) 20-20kHz
S/N ratio	better than 90 dB
Power Amplifier	125W per channel (8Ω, 1kHz, 0.1% THD)
	170W per channel (4Ω, 1kHz, 0.1% THD)
Mic	Type: XLR ref. level: -54 dBu Max: -24dBu z: 2.2kΩ
Stereo STI-3	Type: Phono ref. level: -10dBu Max: +10dBu z: 20kΩ
Mic group out	Type: Phono ref. level: -10dBu Max: +10dBu z: >10kΩ
Master Output	Type: Phono ref. level: -5dBu Max: +10dBu z: >10kΩ
Frequency Response	60 Hz - 10 MHz +0.5 , -1 dB
S/N Ratio	better than 65 dB
Crosstalk	better than 50 dB (3.5MHz)
S-Video	Type: 4 pin mini DIN ref. level: 1Vpp z: 75Ω
Video	Type: Phono ref. level: 1Vpp z: 75Ω
Dimensions	482 (W) x 132 (H) x 350 (D) mm
Power Requirements	230 V ac , 400 W
Mass	approx 15.0 kg

Portable receivers

Specifications	WRR-805A	WRR-810A	WRR-855A	WRR-860A
Carrier frequency range	800 – 862 MHz, selectable (depending on version)	774-862MHz, selectable (depending on version)	774-862MHz, selectable (depending on version)	774-862MHz, selectable (depending on version)
Switchable frequencies	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel	64 within an 8MHz TV Channel
Type of reception	110KF3E	110KF3E	110KF3E	110KF3E
Circuit system	Dual conversion superheterodyne	Dual conversion superhetrodyne	Dual conversion superhetrodyne	Dual conversion superhetrodyne
Local oscillators	Crystal controlled PLL synthesizer	crystal-controlled PLL synthesizer	First, crystal-controlled PLL synthesizer	First, crystal-controlled PLL synthesizer
Reference deviation	±5kHz at 1kHz	±5kHz at 1kHz	±5kHz at 1kHz	±5kHz at 1kHz
Selectivity	60 dB or more (at ±250 kHz detuned)	≥60dB	≥60dB, at ±250kHz detuned	≥60dB, at ±250kHz from the receiving frequency
Spurious signal rejection ratio	70 dB or more	-	≥80dB	≥80dB
Image distortion ratio	60 dB or more	-	≥80dB	≥80dB
Muting level	15 dBμ ±5 dBμ	15dBμ, on-off selectable	15dBμ, on-off selectable	5, 15, 25dBμ, Off selectable
Antenna connector	BNC-R type, 50ohms	BNC-R type, 50ohms	BNC-R type, 50ohms x 2	BNC-R type, 50ohms
Tone signal	32.768 kHz	Approx. 32kHz	Approx. 32kHz	Approx. 32kHz
De-emphasis	50μs	50μs	50μs	50μs
Frequency response	100 Hz to 15,000 Hz ±3 dB	100Hz-15kHz	50Hz-15kHz ±3.0dB	100Hz-15kHz ±3.0dB
Signal-to-noise ratio 1	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz	>60dB, RF input 60dBμ, deviation ±5kHz, modulation 1kHz
Signal-to-noise ratio 2	>96dB, at max deviation	>96dB, at max deviation	>96dB, at max deviation	>96dB, at max deviation
Headroom at ref. Level	39dB	39dB	39dB	39dB
Audio distortion	1% or less (±40 kHz deviation at 1kHz modulation)	≤0.8% with deviation ±22.5kHz, modulation 1kHz	≤1.0% with deviation ±40kHz, modulation 1kHz	≤1.0% with deviation ±40kHz, modulation 1kHz
Audio output level	-58 dBm (±5 kHz deviation at 1kHz modulation)	-58dBμ into 600ohms with deviation ±5kHz, modulation 1kHz	-40dBu with deviation ±5kHz , modulation 1kHz	-58dBu into 600ohms, deviation ±5kHz , modulation 1kHz
Audio output impedance	600 ohms, balanced	150ohms, balanced	25ohms, unbalanced	150ohms, balanced
Audio output connectors	3.5mm dia. phone balanced (TRS)	SMC9-4S	15-pin D-sub	26-pin /XLR-3-32
Monitoring output	-	5mW into 24-45ohms load	-	-
Monitoring connector	-	Mini jack	-	-
Operating voltage	DC 3V, two batteries LR6 (size AA)	Internal battery, 3V 2 x LR6 batteries	External supply DC 6.5-9.0V, 7V when using a BTA-801	Internal batteries, 6V 4 x LR6 type. External power, DC 10-17V
Operating current	Approx. 170 mA	≤180mA	≤200mA at DC 7V	Internal battery, ≤190mA. External power, ≤100mA
Battery life	Approx. 6 hours	6H typical	-	8H typical
Operating temperature	0°C to +50°C (32°F to 122°F)	0° - 50°C	0° - 50°C	0° - 50°C
Storage temperature	-20°C to +55°C (-4°F to +131°F)	-20° - +60°C	-20° - +60°C	-20° - +60°C
Dimensions	44 x 121 x 24 mm (w/h/d)	63(W) x 120(H) x 17(D)mm	88(W) x 119(H) x 31(D)mm	97(W) x 131(H) x 33(D)mm
Mass	140g including batteries	220g with batteries	280g	500g

Specifications — K-1234 RECEIVER BASE UNIT

Frequency range	774-862MHz (depending on version)
Antenna connector	BNC-R type, 50ohms x 2
Cascade connectors	BNC-R type, 50ohms x 2
Audio output level	-20dB/-58dB, selectable
Audio output connector	XLR-3-32C x 6
Monitor output power	5mW
Monitor output connector	phone
Power requirements	DC 10-17V
	AC 100-120/220-240V 50/60Hz
Power consumption	35W
Operating temperature	0° - 50°C
Storage temperature	-20° - +60°C
Dimensions	181(W) x 300(H) x318(D)mm
Mass	6.4kg

Specifications — WD-820A ANTENNA DIVIDER

Frequency range	774-862MHz
Antenna inputs	2 inputs x 2 channels
	BNC-R 50ohms x 4
Distribution outputs	4 outputs x 2 channels,
	BNC-R 50ohms x 8
Cascade outputs	1 output x 2 channels,
	BNC-R 50ohms x 2
Input/output VSWR	<3
Isolation between outputs	>15dB
Cascade output level	±3.0dB of antenna input signal
Distributed output level	±3.0dB of antenna input signal
Antenna operating voltage	DC 9V
Power requirements	AC 220-240V 50/60Hz
Power consumption	6W
Operating temperature	0° - 50°C
Storage temperature	-20° - +60°C
Dimensions	482(W) x 44(H) x300(D)mm
Mass	4.2.kg

Specifications — AN-820A Active Antenna

Antenna gain	10dB ±3dB
Output impedance	50ohms
Output connector	BNC-R type
VSWR	<3
Power requirements	9V (from WRT-820A/WRT-840A/
	WRT-850A receiver or WD-820A/880A divider)
Power consumption	<35mA
Mass	250g
Dimensions	70(W) x 117(H) x132(D)mm
Supplied Accessories	Attachment A, for mounting on a recesse wall box
	Attachment B, for fixing direct to a wall
	Mic stand screw
	Mic stand adapter, PF 1/2-inch to NS 5/8-inch

Specifications — K-1236 ANTENNA

Antenna type	Yagi
Number of elements	5
Frequency range	770-810MHz
Gain	8dB
Output VSWR	less than 2.0
Output impedance	50ohms
Output connector	BNC-J type
Dimensions	429(W) x 269(H) x 65(D)mm
Mass	380g

Specifications — K-1237 ANTENNA BOOSTER UNIT

Operating voltage	internal batteries, 3V 2 x LR6 type
	external power, DC 12V
Operating current	50mA at 12V
Battery life	6H typical
Mass	300g
Dimensions	64(W) x 139(H) x 23(D)mm

Specifications — WD-880A UHF FREQUENCY SPECTRUM DIVIDER

Frequency range	774 -820MHz
Antenna inputs	BNC-R, 50ohms x 2
Distribution outputs	2 outputs x 6 channels,
	BNC-R 50ohms x 12
Distributed output level	±3.0dB of antenna input
	signal
Antenna operating voltage	DC 12 or 9V, selectable
Power requirements	AC 220-240V 50/60Hz
Power consumption	16W
Operating temperature	00 - 500C
Storage temperature	-200 - +600C
Dimensions	482(W) x 44(H) x300(D)mm
Mass	4kg

Specifications — RECEIVING ANTENNA COMPONENTS - INTERCONNECTING COAXIAL CABLES WBC SERIES

* 50ohm coaxial cables, fitted with BNC connectors at both ends, to interconnect antennas, dividers and non-portable receivers

- 0.6m, WBC-0.6B-5P
- 10m, WBC-10B-5P
- 20m, WBC-20B-5P
- 30m, WBC-30B-5P
- 0.6m, WBC-50B-5P

Camera Model#	SUPPLIED MOUNTING HDWIRE	CAMERA/WL MOUNTING HDWIRE	DC CONNECTOR OUTPUT TYPE	AUDIO INPUT CONNECTOR TYPE	COMPATIBLE UHF TUNER	HDWIRE SUPPLIED WITH TUNER	TUNER RELATE OPTIONAL HDWIRE
BETACAM SP							
BVW-200 BVW-300 BVW-300A BVW-400 BVW-400A BVW-D600WS BVW-D600 PVV-3 BVV-5	NP-1	BKW-L601 -or- BKW-L403 (INCLUDES A8278-057-A Bracket) -or- QRD-700 Anaton Bauer bracket	4-PIN 12V DC NONE	XLR (x2)	WRR-855A or WRR-810A or WRR-805A	1/4 WAVE ANTENNAS (x1 or 2). WRR-805 audio cable to miniJack and XLR also Velcro strap for attachment to handgrip	BTA-801 or BTA-802. For WRR-805 the R805 AttachmentS or R805 AttachmentD is required for mounting the 805 according to Sony WL Standard
BETACAM SX							
DNW-7 DNW-9WS DNW-90 DNW-90WS DNV-5	V-wedge for Li-Ion battery included	A8278-057-A bracket (For 2nd WL unit only)	Power supplied directly from camera 4-PIN 12V DC (FOR 2ND WL ONLY)	XLR (X2) (For 2nd WL unit ONLY) Signal from WL unit automatically routed to track 3	WRR-855A or WRR-810A or WRR-805	1/4 WAVE ANTENNAS (x1 or 2). WRR-805 audio cable to miniJack and XLR also Velcro strap for attachment to handgrip	BTA-801 or BTA-802. For WRR-805 the R805 AttachmentS or R805 AttachmentD is required for mounting the 805 according to Sony WL Standard
DIGITAL BETACAM							
DVW-700 DVW-700WS DVW-707 DVW-709WS DVW-790WS	V-wedge for Li-Ion battery included A8278-057-A bracket included only with DNW-700	QRD-700 Anaton Bauer bracket -or- A8278-057-A bracket for most DVW's	4-PIN 12V DC	XLR (X2)	WRR-855A or WRR-810A or WRR-805A	1/4 WAVE ANTENNAS (x1 or 2). WRR-805 audio cable to miniJack and XLR also Velcro strap for attachment to handgrip	BTA-801 or BTA-802. For WRR-805 the R805 AttachmentS or R805 AttachmentD is required for mounting the 805 according to Sony WL Standard
DVCAM							
DSR-130 DSR-200 DSR-300 DSR-500WS	NP-1 - -	- DSBK-201 CA-WR855	4-PIN 12V DC - Power supplied through CA-WR 855	XLR (x2) Not required for DSR-300 and 500WS	WRR-855A or WRR-810A	1/4 WAVE ANTENNAS (x1 or 2). WRR-805 audio cable to miniJack and XLR also Velcro strap for attachment to handgrip	BTA-801 (Includes plate adapter) CA-WR855
DVCAM, Handheld type							
DSR-PD100							

WRR-810A and WRR-855A with BTA-801/BTA-802 use the same mounting system and may be interchanged. These are compatible with the BKW-L601, DSBK-201, BKW-L403, NP-1 and Anton Bauer QRD700. The WRR-855A with the CA-WR855 adapter works ONLY with the DSR-300 & 500(WS).
The WRR-855A with no bracket or adapter, works ONLY with Betacam SX models (plug-in slot)

	PACKAGE#1 HAND-HELD	PACKAGE#2 BODY-PACK/ LAVALIER	PACKAGE#3 LOW COST
	WRR-855A (tuner) WRT-830A (transmitter) Low-cost transmitter: WRT-807A or WRT-810A68	WRR-855A (tuner) WRT-860A w/ECM-77Bc lavalier microphone Low-cost transmitter: WRT-805A or w/ECM- 44BMP or WRT-822A or w/ECM-77BC	WRR-855A (tuner) WRT-805A w/ECM-44BMP or ECM-77BMP WRT-807A (Hand Held)
	WRR-855A (tuner) WRT-830A(transmitter) or Low-cost transmitter: WRT-807A or WRT-810A	WRR-855A (tuner) Low-cost transmitter: WRT-805A or w/ECM-44BMP or WRT-822A or w/ECM-77BC	WRR-805A (tuner) WRT-805A w/ECM- 44BMP or ECM-77BMP -or- WRT-807A (Hand Held)
	WRR-855A (tuner) WRT-830A (transmitter) or Low-cost transmitter: WRT-807A or WRT-810A	WRR-855A (tuner) Low-cost transmitter: WRT-805A or w/ECM- 44BMP or WRT-822A or w/ECM- 77BC	WRR-805A (tuner) WRT-805A w/ECM- 44BMP or ECM-77BMP -or- WRT-807A
	WRR-855A (tuner) WRT-830A or Low-cost transmitters: WRT-807A or WRT-810A	WRR-855A (tuner) Low-cost transmitters: WRT-805A or w/ECM- 44BMP or WRT-822A or w/ECM-77BC	WRR-805A (tuner) WRT-805A or w/ECM-44BMP or WRT-822A or w/ECM-77BC
			WRR-805A (tuner) WRT-805A or w/ECM-44BMP or WRT-822A or w/ECM-77BC

Dealer Stamp

SONY

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